WHAT IS CLAIMED IS:

1. A negatively charged microporous membrane comprising a porous substrate and a crosslinked coating having pendant anionic groups.

2. The negatively charged microporous membrane of claim 1, wherein the crosslinked coating is prepared from a polymerized composition comprising an unsaturated monomer having an anionic group, at least one or more N-(hydroxyalkyl)- or N-(alkoxyalkyl)- acrylamide, and a hydrophilic unsaturated monomer.

3. The negatively charged microporous membrane of claim 2, wherein the hydrophilic unsaturated monomer is nonionic.

4. The negatively charged microporous membrane of claim 3, wherein the hydrophilic unsaturated monomer is an acrylic monomer.

5. The negatively charged microporous membrane of claim 2, wherein the N-(hydroxyalkyl)- or N-(alkoxyalkyl)- acrylamide includes an alkyl group of 4 carbon atoms or less.

6. The negatively charged microporous membrane of claim 1, wherein the crosslinked coating includes a hydroxyl-rich material.

7. The negatively charged microporous membrane of claim 6, wherein the hydroxyl-rich material is a polysaccharide.

8. The negatively charged microporous membrane of claim 6 or 7, wherein the coating further includes a polymerized composition comprising an unsaturated monomer having an anionic group and an N-(hydroxyalkyl)- or N-(alkoxyalkyl)-acrylamide.

9. The negatively charged microporous membrane of any of claims 1-8, wherein said anionic group is a sulfonic or carboxylic acid.

10. The negatively charged microporous membrane of claim 2 or 8, wherein the coating is prepared from composition that further includes an initiator.

11. The negatively charged microporous membrane of claim 3, wherein said unsaturated monomer is an acrylic monomer having a sulfonic or carboxylic acid group.

12. The negatively charged microporous membrane of claims 11, wherein said acrylic monomer is an acrylate or acrylamide.

13. The negatively charged microporous membrane of claim 12, wherein said acrylic monomer is an acrylamide.

14. The negatively charged microporous membrane of claim 13, wherein said acrylamide is an alkylacrylamide.

15. The negatively charged microporous membrane of claim 13, wherein said acrylamide has a sulfonic acid group.

16. The negatively charged microporous membrane of claim 15, wherein said acrylamide is acrylamido-N-alkylsulfonic acid.

17. The negatively charged microporous membrane of claim 13, wherein said monomer is an acrylamide having a carboxylic acid group.

18. The negatively charged microporous membrane of claim 17, wherein said composition includes a further acrylic monomer having a carboxylic acid group.

19. The negatively charged microporous membrane of claim 18, wherein said further acrylic monomer is an acrylate.

20. The negatively charged microporous membrane of claim 19, wherein said acrylate is β-carboxyethyl acrylate.

21. The negatively charged microporous membrane of claim 4, wherein said acrylic monomer is a hydroxyacrylic monomer.

22. The negatively charged microporous membrane of claim 21, wherein said hydroxyacrylic monomer is a hydroxyacrylamide or an hydroxyacrylate.

23. The negatively charged microporous membrane of any of claims 2-5, wherein said composition includes an N-(alkoxymethyl)acrylamide.

24. The negatively charged microporous membrane of claim 10, wherein said initiator is a free radical initiator.

25. The negatively charged microporous membrane of claim 2 or 6, wherein said polysaccharide is dextran.

26. The negatively charged microporous membrane of any of claims 2-5, wherein said composition further includes a polysaccharide.

27. The negatively charged microporous membrane of claim 26, wherein said polysaccharide is dextran.

28. A negatively charged microporous membrane having a dynamic protein binding capacity of about 25 mg/ml lysozyme or more comprising a porous substrate and a crosslinked coating that provides a fixed negative charge to the membrane.

29. A negatively charged microporous membrane comprising a porous substrate and a crosslinked coating comprising anionic groups and amide-amide and amide-ester crosslinks.

30. The negatively charged microporous membrane of any of claims 1-29, wherein said porous substrate comprises a substrate polymer.

31. The negatively charged microporous membrane of claim 30, wherein said substrate polymer is selected from the group consisting of polyaromatics, polysulfones, polyolefins, polystyrenes, polyamides, polyimides, cellulose acetates, cellulose nitrates, polycarbonates, polyesters, and fluoropolymers.

32. The negatively charged microporous membrane of claim 31, wherein said substrate polymer is a polysulfone.

33. The negatively charged microporous membrane of any of claims 1-33, wherein said substrate is hydrophilic.

34. A device comprising the negatively charged microporous membrane of any of claims 1-33.

35. A process for preparing a negatively charged microporous membrane comprising a porous substrate and a crosslinked coating having anionic groups, the process comprising:

(a) providing a porous substrate;

(b) contacting said substrate with a polymerized composition comprising an unsaturated monomer having an anionic group, at least one or more of a N-(hydroxyalkyl)- or N-(alkoxyalkyl)- acrylamide, a hydrophilic unsaturated monomer, and an initiator;

(c) curing the substrate obtained in (b) to obtain the negatively charged membrane; and

(d) optionally, extracting the membrane obtained in (c) to remove extractable residue therein.

36. A process for preparing a negatively charged microporous membrane comprising a porous substrate and a crosslinked coating having anionic groups, the process comprising:

(a) providing a porous substrate;

(b) contacting said substrate with a polysaccharide and a polymerized composition comprising an unsaturated monomer having an anionic group, an N-(hydroxymethyl)- or N-(alkoxymethyl)- acrylamide, and an initiator;

(c) curing the substrate obtained in (b) to obtain the negatively charged membrane; and

(d) optionally, extracting the membrane obtained in (c) to remove extractable residue therein.

37. The process of claim 35 or 36, wherein said anionic group is a sulfonic or carboxylic acid.

38. The process of claim 37, wherein said unsaturated monomer is an acrylic monomer having a sulfonic or carboxylic acid group.

39. The process of claim 38, wherein said acrylic monomer having a sulfonic or carboxylic acid group is an acrylate or an acrylamide.

40. The process of claim 35 or 36, wherein said coating composition further includes a hydroxyl-rich material.

41. The process of any of claims 35-40, wherein said porous substrate comprises a substrate polymer.

42. The negatively charged membrane prepared by the process of any of claims 35-41.

43. A process for separating positively charged material from a fluid, said process comprising placing said fluid in contact with the negatively charged microporous membrane of any of claims 1-44 and 62 so as to adsorb the positively charged material to said membrane.

44. The process of claim 43, wherein said material is a biomolecule.

45. A process for transferring biomolecules from an electrophoresis gel comprising contacting said gel with a membrane of any of claims 1-44 and 42 and transferring the biomolecules to the membrane.

46. The process of claim 45, wherein said biomolecule is selected from the group consisting of proteins, polypeptides, amino acids, and nucleic acids, and combinations thereof.

47. The process of claim 43 or 44, further including recovering the positively charged material adsorbed on the membrane.